Lauryl Sulfate Agar

Cat. 1309

Selective isolation and enumeration of coliforms

Practical information

Aplications	Categories
Selective enumeration	Coliforms
Selective isolation	Coliforms

Industry: Water / Food / Dairy products



Principles and uses

Lauryl Sulfate Agar is a selective medium used in the presumptive detection of coliforms in waters, dairy products, seafood and foods, according to APHA Standard Methods, and by using the membrane filtration technique.

The coliform group is both aerobic and anaerobic facultative, Gram-negative, non-spore forming rods which ferment lactose producing acid and gas at 35 ºC within 48 hours.

Casein peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group. Lactose is a fermentable complex carbohydrate energy source. Sodium lauryl sulfate is the selective agent used to inhibit organisms other than coliforms. Sporulating aerobic bacteria are completely inhibited. Phenol red is a pH indicator. Bacteriological agar is the solidifying agent.

Formula in g/L

Bacteriological agar	15	Casein peptone	40
Lactose	30	Phenol red	0,2
Sodium lauryl sulfate	1	Yeast extract	6

Preparation

Suspend 92,2 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 45-50 ºC, mix well and dispense into plates.

Instructions for use

Membrane filtration method:
- Filter an appropriate volume of the sample through the membrane.
- Place the membrane on the surface of the agar plate, avoiding the formation of air bubbles.
- Invert the plates and incubate at 35±2 ºC for 24-48 hours.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige pink	Red	7,4±0,2

DOMINIQUE DUTSCHER SAS

Microbiological test

Incubation conditions: (35±2 ºC / 24-48 h).

Microorganisms	Specification	Characteristic reaction
Enterobacter aerogenes ATCC 13048	Good growth	Colony color Yellow
Enterococcus faecalis ATCC 19433	Inhibited growth	
Escherichia coli ATCC 25922	Good growth	Colony color Yellow

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

APHA 1998 Standard Methods for the examination of water and wastewater, 20th edition.

DOMINIQUE DUTSCHER SAS